

## Protecting drinking water with intelligent metering

By introducing intelligent water metering, the town of Saldanha Bay has seen an immediate drop in their water loss as well as improved customer service. Data from smart meters gives the municipality insight into reducing water loss in the face of droughts and brings them closer to their goal of becoming one of South Africa's first smart cities.



Saldanha Bay is located in the Western Cape Region north of Cape Town in South Africa. The municipality has a dedicated strategy to become one of South Africa's first smart cities and to be a role model for their country by being an innovative municipality leading the way through technology, best practices and a caring culture.

Part of the strategy is to combine the utility's consumption data with the city's information system to better utilise its value. In 2017, they therefore decided to install smart water meters that are read automatically via a radio network.

### **Data enables sustainable water supply**

Saldanha Bay is situated in a water scarce part of South Africa. During 2017, the region faced one of the worst droughts in its history. The municipality knew they needed to start saving and managing water resources differently in order to ensure sustainability of their supply to the community.

Along with an immediate program of pressure management and severe water restrictions, they also decided to invest in a smart water metering solution. The focus for the municipality was threefold: Bring down water loss, ensure fair billing with accurate monitoring and consumption data and reduce meter reading costs.

The idea behind their holistic approach was to use technology to work with real-time data. Today, the utility is notified by alarms in the meters whenever leaks or bursts occur in their distribution network. As a result, they are now able to inform their customers before the incident becomes critical. "With the new meters and the remote reading system, we are able to provide better service to our customers. The solution also makes it possible to get real-time data of the consumption and water balances, which gives us valuable information about our distribution network. We have already seen massive improvements since we implemented the smart metering solution" says Saldanha Bay Municipality.

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**SALDANHA BAY MUNICIPALITY**

### Fighting water loss in a drought region

The project started in 2017 with a pilot site in Vredenburg Town where a network with one concentrator and 2,558 meters was installed.

Within the first 30 days of operations, 317 info codes (alarms) on Leak, Burst, Dry and Reverse flow were identified by the data management system READy Manager. The notifications for leaks and bursts were sent to the municipality where the team either contacted the residents directly or sent a team to the site. After fixing the problem, the night flow water usage dropped back to normal.

Overall, since the implementation of Kamstrup's smart metering solution, many leaks have been detected and fixed within just hours of occurrence. This empowered the municipality to easily resolve billing disputes and enhance billing efficiency. Additionally, the improved accuracy of their meter reading has increased revenue, and real-time monitoring of consumption and water balances has now become a reality. Since the installation of the fixed network reading of the meters, these improvements have enabled them to reduce their water loss by more than 4 mill. litres.

### Towards a green and sustainable future

For the great results achieved so far, Saldanha Bay Municipality received a certificate of outstanding achievement for the 'Greenest Municipality Competition' in November 2019. The competition was based on different innovation projects and Saldanha was accredited for three different categories including 'Smart Meters for Water Management and Conservation' and 'Pressure management for Water Management and Conservation'. The certificate is a testament to how, together with Kamstrup, the municipality is transitioning towards being a truly smart city, and also supporting the UN sustainable development goal number 6, to "ensure the availability and sustainable management of water and sanitation for all".

After the impressive results from the pilot site, the project will be implemented large scale with a total of 30,000 meters to be installed over the next few years. Saldanha Bay Municipality looks forward to seeing the future roll-out of this project and the benefits created for the municipality and their community.



### About the project

- **Project:** Pilot with 2,500 meters
- **Meters:** MULTICAL® 21
- **System:** READy, fixed network
- **Status:** Pilot successful, roll-out of 30,000 meters

# Think forward

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